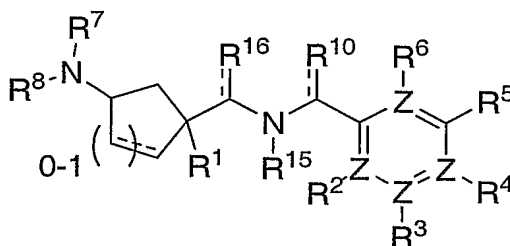


WHAT IS CLAIMED:

1. A compound of Formula I:



I

wherein:

Z is N or C, where no more than two Z are N;

R^1 is selected from: $-C_{1-6}alkyl$, $-C_{0-6}alkyl-O-C_{1-6}alkyl$, $-C_{0-6}alkyl-S-C_{1-6}alkyl$, $-C_{0-6}alkyl-SO_2-C_{1-6}alkyl$, $-C_{0-6}alkyl-SO-C_{1-6}alkyl$, $-C_{0-6}alkyl-SO_2-NR^{12}-C_{0-6}alkyl$, $-(C_{0-6}alkyl)-(C_{3-7}cycloalkyl)-(C_{0-6}alkyl)$, hydroxy, heterocycle, $-CN$, $-NR^{12}R^{12}$, $-NR^{12}COR^{13}$, $-NR^{12}SO_2R^{14}$, $-COR^{11}$, $-CONR^{12}R^{12}$, and phenyl; where alkyl and the cycloalkyl are unsubstituted or substituted with 1-7 substituents independently selected from: halo, hydroxy, $-O-C_{1-3}alkyl$, trifluoromethyl, $C_{1-3}alkyl$, $-O-C_{1-3}alkyl$, $-COR^{11}$, $-SO_2R^{14}$, $-NHCOR^{15}$, $-NHCO_2CH_3$, heterocycle, $=O$, and $-CN$, and where phenyl and heterocycle are independently unsubstituted or substituted with 1-3 substituents independently selected from: halo, hydroxy, $C_{1-3}alkyl$, $C_{1-3}alkoxy$, trifluoromethyl and $NHCOR^{15}$;

when the Z attached to R^2 is N, R^2 is oxygen or is absent, and when the Z attached to R^2 is C, R^2 is selected from: hydrogen, $C_{1-3}alkyl$ optionally substituted with 1-3 fluoro, $-O-C_{1-3}alkyl$ optionally substituted with 1-3 fluoro, hydroxy, chloro, fluoro, bromo and phenyl;

when the Z attached to R³ is N, R³ is oxygen or is absent, and when the Z attached to R³ is C, R³ is selected from: hydrogen, hydroxy, halo, C₁₋₃alkyl where the alkyl is unsubstituted or substituted with 1-6 substituents independently selected from: fluoro, hydroxy and -COR¹¹, -NR¹²R¹², -COR¹¹, -CONR¹²R¹², -NR¹²COR¹³, -OCONR¹²R¹², -NR¹²CONR¹²R¹², -heterocycle, -CN, -NR¹²-SO₂-NR¹²R¹², -NR¹²-SO₂-R¹⁴, -SO₂-NR¹²R¹² and nitro;

when the Z attached to R⁴ is N, R⁴ is oxygen or is absent, and when the Z attached to R⁴ is C, R⁴ is selected from: hydrogen, C₁₋₃alkyl optionally substituted with 1-3 fluoro, -O-C₁₋₃alkyl optionally substituted with 1-3 fluoro, hydroxy, chloro, fluoro, bromo and phenyl;

R⁵ is selected from: C₁₋₆alkyl where alkyl is unsubstituted or substituted with 1-6 substituents selected from fluoro and hydroxyl, -O-C₁₋₆alkyl where alkyl is unsubstituted or substituted with 1-6 fluoro, -CO-C₁₋₆alkyl where alkyl is unsubstituted or substituted with 1-6 fluoro, -S-C₁₋₆alkyl where alkyl is unsubstituted or substituted with 1-6 fluoro, pyridyl which is unsubstituted or substituted with one or more substituents selected from: halo, trifluoromethyl, C₁₋₄alkyl, and COR¹¹, fluoro, chloro, bromo, -C₄₋₆cycloalkyl, -O-C₄₋₆cycloalkyl, phenyl which is unsubstituted or substituted with one or more substituents selected from halo, trifluoromethyl, C₁₋₄alkyl, and COR¹¹, -O-phenyl which is unsubstituted or substituted with one or more substituents selected from: halo, trifluoromethyl, C₁₋₄alkyl, and COR¹¹, -C₃₋₆cycloalkyl where alkyl is unsubstituted or substituted with 1-6 fluoro, -O-C₃₋₆cycloalkyl where alkyl is unsubstituted or substituted with 1-6 fluoro, -heterocycle, -CN and -COR¹¹;

when the Z attached to R⁶ is N, R⁶ is oxygen or is absent, and when the Z attached to R⁶ is C, R⁶ is selected from: hydrogen, C₁₋₃alkyl optionally substituted with 1-3 fluoro, -O-C₁₋₃alkyl optionally substituted with 1-3 fluoro, hydroxy, chloro, fluoro, bromo and phenyl;

R⁷ is selected from: hydrogen, C₁₋₈alkyl which is unsubstituted or substituted with 1-6 substituents selected from: hydroxy, halo, -O-C₁₋₆alkyl, CN, -NR¹²R¹², -NR¹²COR¹³, -

NR¹²SO₂R¹⁴, -COR¹¹, -CONR¹²R¹², phenyl and heterocycle, where the alkyl, phenyl, and heterocycle are unsubstituted or substituted with 1-3 substituents selected from: halo, hydroxy, C₁₋₃alkyl, C₁₋₃alkoxy, -CO₂H, -CO₂-C₁₋₆alkyl, and trifluoromethyl, and -SO₂C₁₋₆alkyl which is unsubstituted or substituted with 1-6 substituents selected from: hydroxy, halo, -O-C₁₋₆alkyl, CN, -NR¹²R¹², -NR¹²COR¹³, -NR¹²SO₂R¹⁴, -COR¹¹, -CONR¹²R¹², phenyl and heterocycle, where the alkyl, phenyl, and heterocycle are unsubstituted or substituted with 1-3 substituents selected from: halo, hydroxy, C₁₋₃alkyl, C₁₋₃alkoxy, -CO₂H, -CO₂-C₁₋₆alkyl, and trifluoromethyl; R⁸ is selected from C₁₋₁₀alkyl, -SO₂C₁₋₁₀alkyl, pyridyl or phenyl, unsubstituted or substituted with 1-5 substituents selected from: hydroxy, halo, -O-C₁₋₆alkyl, -S-C₁₋₆alkyl, CN, -NR¹²R¹², -NR¹²COR¹³, -NR¹²SO₂R¹⁴, -COR¹¹, -CONR¹²R¹², -SO₂R¹⁴, heterocycle, =O (where the oxygen is connected via a double bond), phenoxy and phenyl, where the alkyl, phenyl, phenoxy and heterocycle are unsubstituted or substituted with 1-3 substituents selected from: halo, hydroxy, C₁₋₃alkyl, C₁₋₃alkoxy, -COR¹¹, -CN, -NR¹²R¹², -SO₂R¹⁴, -NR¹²COR¹³, -NR¹²SO₂R¹⁴, and -CONR¹²R¹², where the alkyl and alkoxy are optionally substituted with 1-5 fluoro;

R¹⁰ and R¹⁶ are independently selected from: =O, hydrogen, phenyl, C₁₋₆alkyl which is unsubstituted or substituted with 1-6 of the following substituents: -COR¹¹, hydroxy, fluoro, chloro, and -O-C₁₋₃alkyl; and,

R¹¹ is independently selected from: hydroxy, hydrogen, C₁₋₆ alkyl, -O-C₁₋₆alkyl, benzyl, phenyl, C₃₋₆ cycloalkyl, where the alkyl, phenyl, benzyl, and cycloalkyl groups are unsubstituted or substituted with 1-3 substituents independently selected from: halo, hydroxy, C₁₋₃alkyl, C₁₋₃alkoxy, -CO₂H, -CO₂-C₁₋₆ alkyl, and trifluoromethyl,

R¹² is selected from: hydrogen, C₁₋₆ alkyl, benzyl, phenyl, C₃₋₆ cycloalkyl, where the alkyl, phenyl, benzyl, and cycloalkyl groups are unsubstituted or substituted with 1-3 substituents independently selected from: halo, hydroxy, C₁₋₃alkyl, C₁₋₃alkoxy, -CO₂H, -CO₂-C₁₋₆alkyl, and trifluoromethyl, and

R^{13} is selected from: hydrogen, C_{1-6} alkyl, $-O-C_{1-6}$ alkyl, benzyl, phenyl, C_{3-6} cycloalkyl, where the alkyl, phenyl, benzyl, and cycloalkyl groups are unsubstituted or substituted with 1-3 substituents independently selected from: halo, hydroxy, C_{1-3} alkyl, C_{1-3} alkoxy, $-CO_2H$, $-CO_2-$
5 C_{1-6} alkyl, and trifluoromethyl,

R^{14} is selected from: hydroxy, C_{1-6} alkyl, $-O-C_{1-6}$ alkyl, benzyl, phenyl, C_{3-6} cycloalkyl, where the alkyl, phenyl, benzyl, and cycloalkyl groups are unsubstituted or substituted with 1-3 substituents independently selected from: halo, hydroxy, C_{1-3} alkyl, C_{1-3} alkoxy, $-CO_2H$, $-CO_2-$
10 C_{1-6} alkyl, and trifluoromethyl,

R^{15} is selected from hydrogen and C_{1-3} alkyl;

or, R^2 and R^{15} are joined together to form a carbocycle or heterocycle ring with a linker selected
15 from: $-CH_2(CR^{17}R^{17})_{1-3}-$, $-CH_2NR^{18}-$, $-NR^{18}-CR^{17}R^{17}-$, $-CR^{17}R^{17}O-$, $-CR^{17}R^{17}SO_2-$, $-CR^{17}R^{17}SO-$, $-CR^{17}R^{17}S-$, $-CR^{17}R^{17}-$, and $-NR^{18}-$ (with the left side of the linker being bonded to the amide nitrogen at R^{15}),

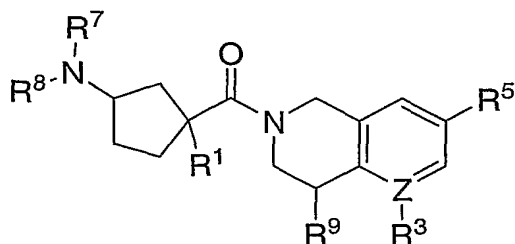
R^{17} is selected from: hydrogen, hydroxy, halo and C_{1-3} alkyl, where the alkyl is unsubstituted or
20 substituted with 1-6 substituents independently selected from: fluoro, and hydroxy, $-NR^{12}R^{12}$, $-COR^{11}$, $-CONR^{12}R^{12}$, $-NR^{12}COR^{13}$, $-OCONR^{12}R^{12}$, $-NR^{12}CONR^{12}R^{12}$, -heterocycle, -CN, $-NR^{12}-SO_2-NR^{12}R^{12}$, $-NR^{12}-SO_2-R^{14}$, $-SO_2-NR^{12}R^{12}$, and $=O$, and where when one R^{17} is connected to the ring via a double bond the other R^{17} at the same position is absent,

25 R^{18} is selected from: hydrogen, C_{1-3} alkyl unsubstituted or substituted with 1-6 substituents independently selected from: fluoro, and hydroxy, COR^{13} , SO_2R^{14} , and $SO_2NR^{12}R^{12}$;

the dashed line represents an optional bond;

30 and pharmaceutically acceptable salts thereof and individual diastereomers thereof.

2. The compound of claim 1 of the formula Ia:

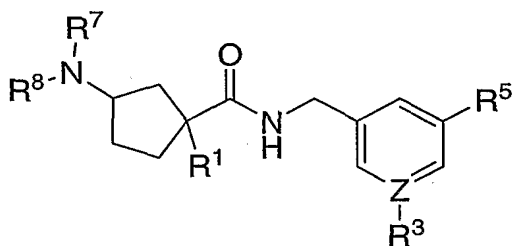


Ia

wherein R^9 is selected from: hydrogen, hydroxy, C_{1-3} alkyl unsubstituted or substituted with 1-6 substituents independently selected from fluoro and hydroxy, $-COR^{11}$, $-CONR^{12}R^{12}$, $-NR^{12}COR^{11}$, $-NR^{12}-SO_2-R^{14}$, $-SO_2-NR^{12}R^{12}$, and $=O$, where R^9 is connected to the ring via a double bond,

and pharmaceutically acceptable salts thereof and individual diastereomers thereof.

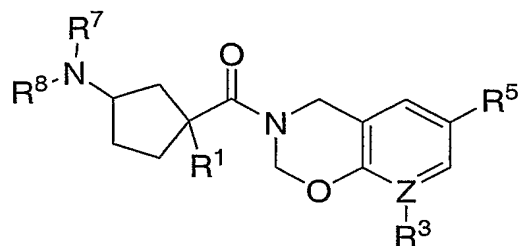
3. The compound of claim 1 of the formula Ib:



Ib

and pharmaceutically acceptable salts thereof and individual diastereomers thereof.

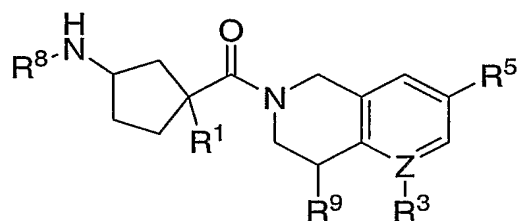
4. The compound of claim 1 of the formula Ic:



Ic

and pharmaceutically acceptable salts thereof and individual diastereomers thereof.

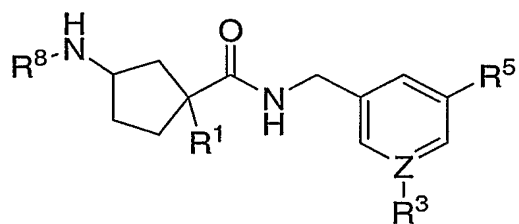
- 5 5. The compound of claim 1 of the formula Id:



Id

- 10 and pharmaceutically acceptable salts thereof and individual diastereomers thereof.

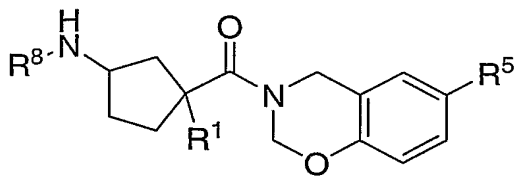
6. The compound of claim 1 of the formula Ie:



Ie

and pharmaceutically acceptable salts thereof and individual diastereomers thereof.

7. The compound of claim 1 of the formula If:



If

and pharmaceutically acceptable salts thereof and individual diastereomers thereof.

8. The compound of claim 1 wherein R¹ is selected from:

-C₁₋₆alkyl, -C₀₋₆alkyl-O-C₁₋₆alkyl, and -(C₀₋₆alkyl)-(C₃₋₇cycloalkyl)-(C₀₋₆alkyl), where the alkyl and the cycloalkyl are unsubstituted or substituted with 1-7 substituents independently selected from: halo, hydroxy, -O-C₁₋₃alkyl, trifluoromethyl, C₁₋₃alkyl, -O-C₁₋₃alkyl, -COR¹¹, -CN, -NR¹²R¹², and -CONR¹²R¹²,

and pharmaceutically acceptable salts thereof and individual diastereomers thereof.

9. The compound of claim 1 wherein R¹ is selected from:

-C₁₋₆alkyl unsubstituted or substituted with 1-6 substituents independently selected from: halo, hydroxy, -O-C₁₋₃alkyl, trifluoromethyl, and -COR¹¹,

-C₀₋₆alkyl-O-C₁₋₆alkyl- unsubstituted or substituted with 1-6 substituents independently selected from: halo, trifluoromethyl, and -COR¹¹,

-(C₃₋₅cycloalkyl)-(C₀₋₆alkyl) unsubstituted or substituted with 1-7 substituents independently selected from: halo, hydroxy, -O-C₁₋₃alkyl, trifluoromethyl, and -COR¹¹,

and pharmaceutically acceptable salts thereof and individual diastereomers thereof.

5

10. The compound of claim 1 wherein R¹ is C₁₋₆alkyl unsubstituted or substituted with 1-6 substituents selected from hydroxyl and fluoro, and pharmaceutically acceptable salts thereof and individual diastereomers thereof.

10

11. The compound of claim 1 wherein R¹ is selected from: -CH(CH₃)₂, -CH(OH)CH₃ and -CH₂CF₃, and pharmaceutically acceptable salts thereof and individual diastereomers thereof.

15

12. The compound of claim 1 wherein R¹ is selected from: thiazolyl, unsubstituted or substituted with NHCOR¹⁵, and pharmaceutically acceptable salts thereof and individual diastereomers thereof.

20

13. The compound of claim 1 wherein the Z attached to R² is C, and pharmaceutically acceptable salts thereof and individual diastereomers thereof.

14. The compound of claim 1 wherein R² is hydrogen or R² and R¹⁵ are linked by -CH₂-CH₂- or -CH₂-O-, and pharmaceutically acceptable salts thereof and individual diastereomers thereof.

25

15. The compound of claim 1 wherein when the Z attached to R³ is N, R³ is absent or is O, and pharmaceutically acceptable salts thereof and individual diastereomers thereof.

30

16. The compound of claim 1 wherein when the Z attached to R³ is N, R³ is absent. and pharmaceutically acceptable salts thereof and individual diastereomers thereof.

17. The compound of claim 1 wherein when the Z attached to R³ is C, R³ is selected from: hydrogen, halo, hydroxy, C₁₋₃alkyl, where the alkyl is unsubstituted or substituted with 1-6 substituents independently selected from: fluoro, and hydroxy, -COR¹¹, -CONR¹²R¹²,
5 -heterocycle, -NR¹²-SO₂-NR¹²R¹², -NR¹²-SO₂-R¹⁴, -SO₂-NR¹²R¹², -nitro, and -NR¹²R¹²;

and pharmaceutically acceptable salts thereof and individual diastereomers thereof.

18. The compound of claim 1 wherein when the Z attached to R³ is C R³ is
10 hydrogen, and pharmaceutically acceptable salts thereof and individual diastereomers thereof.

19. The compound of claim 1 wherein the Z attached to R⁴ is C, and pharmaceutically acceptable salts thereof and individual diastereomers thereof.

20. The compound of claim 1 wherein R⁴ is hydrogen, and pharmaceutically
15 acceptable salts thereof and individual diastereomers thereof.

21. The compound of claim 1 wherein R⁵ is selected from: C₁₋₆alkyl substituted with 1-6 fluoro, -O-C₁₋₆alkyl substituted with 1-6 fluoro, chloro, bromo, and phenyl,
20 and pharmaceutically acceptable salts thereof and individual diastereomers thereof.

22. The compound of claim 1 wherein R⁵ is selected from: trifluoromethyl, trifluoromethoxy, chloro, bromo, and phenyl, and pharmaceutically acceptable salts thereof and individual diastereomers thereof.

23. The compound of claim 1 wherein R⁵ is trifluoromethyl, and
25 pharmaceutically acceptable salts thereof and individual diastereomers thereof.

24. The compound of claim 1 wherein the Z attached to R⁶ is C, and pharmaceutically acceptable salts thereof and individual diastereomers thereof.

25. The compound of claim 1 wherein R⁶ is hydrogen, and pharmaceutically acceptable salts thereof and individual diastereomers thereof.

26. The compound of claim 1 wherein R⁷ is hydrogen or methyl and pharmaceutically acceptable salts thereof and individual diastereomers thereof.

27. The compound of claim 1 wherein R⁷ is hydrogen, and pharmaceutically acceptable salts thereof and individual diastereomers thereof.

28. The compound of claim 1 wherein R⁸ is selected from: C₁₋₈alkyl optionally substituted with hydroxy, C₁₋₆alkyl substituted with 1-6 fluoro, C₁₋₆alkyl substituted with -COR¹¹, benzyl, unsubstituted or substituted with 1-3 substituents selected from: hydroxy, methoxy, chloro, fluoro, -COR¹¹, methyl and trifluoromethyl, -CH₂-pyridyl, unsubstituted or substituted with 1-3 substituents selected from: hydroxy, methoxy, chloro, fluoro, methyl and trifluoromethyl, and pharmaceutically acceptable salts thereof and individual diastereomers thereof.

29. The compound of claim 1 wherein R⁹ is hydroxy, hydrogen, =O, where R⁹ is connected to the ring via a double bond, and pharmaceutically acceptable salts thereof and individual diastereomers thereof.

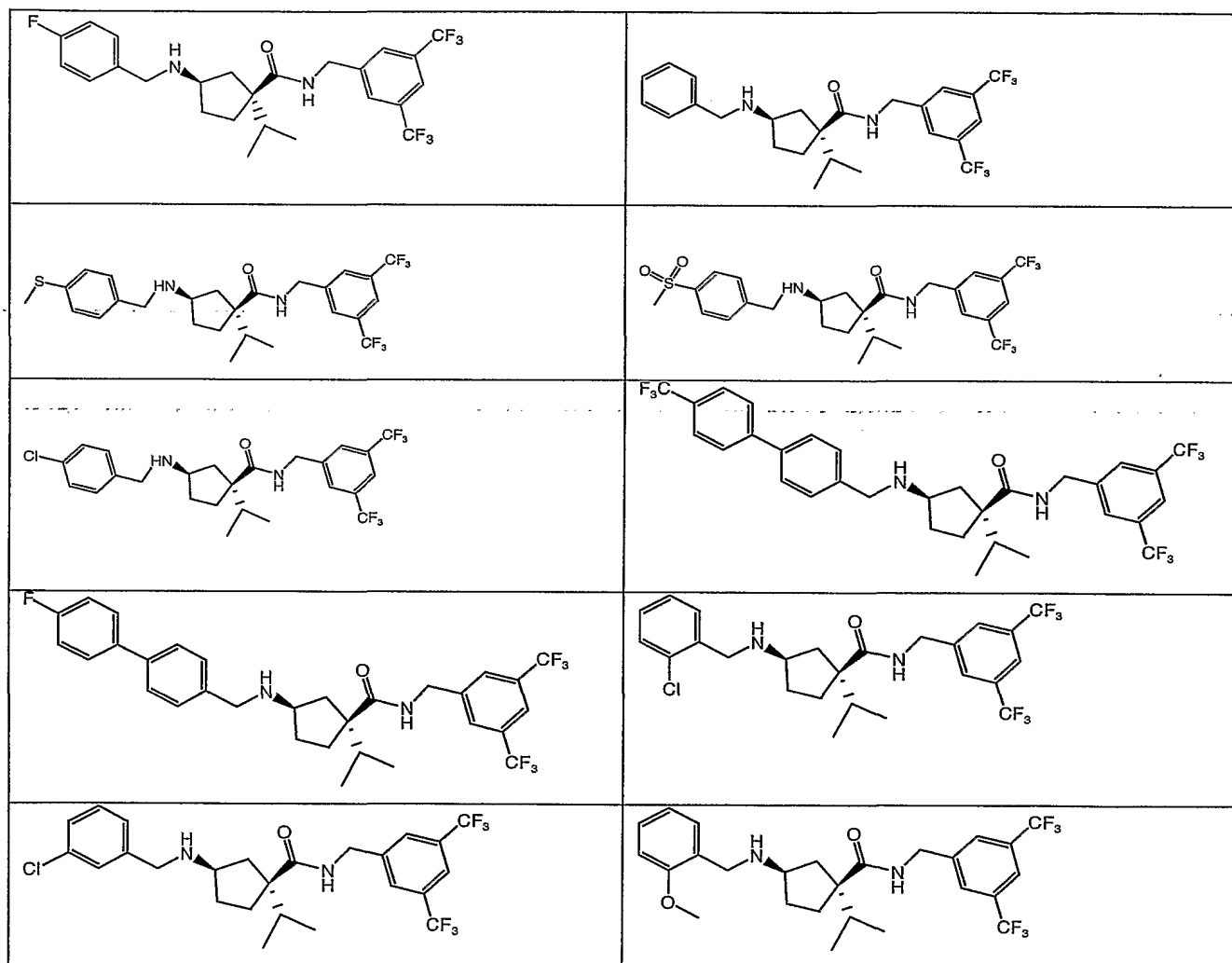
30. The compound of claim 1 wherein R⁹ is hydrogen, and pharmaceutically acceptable salts thereof and individual diastereomers thereof.

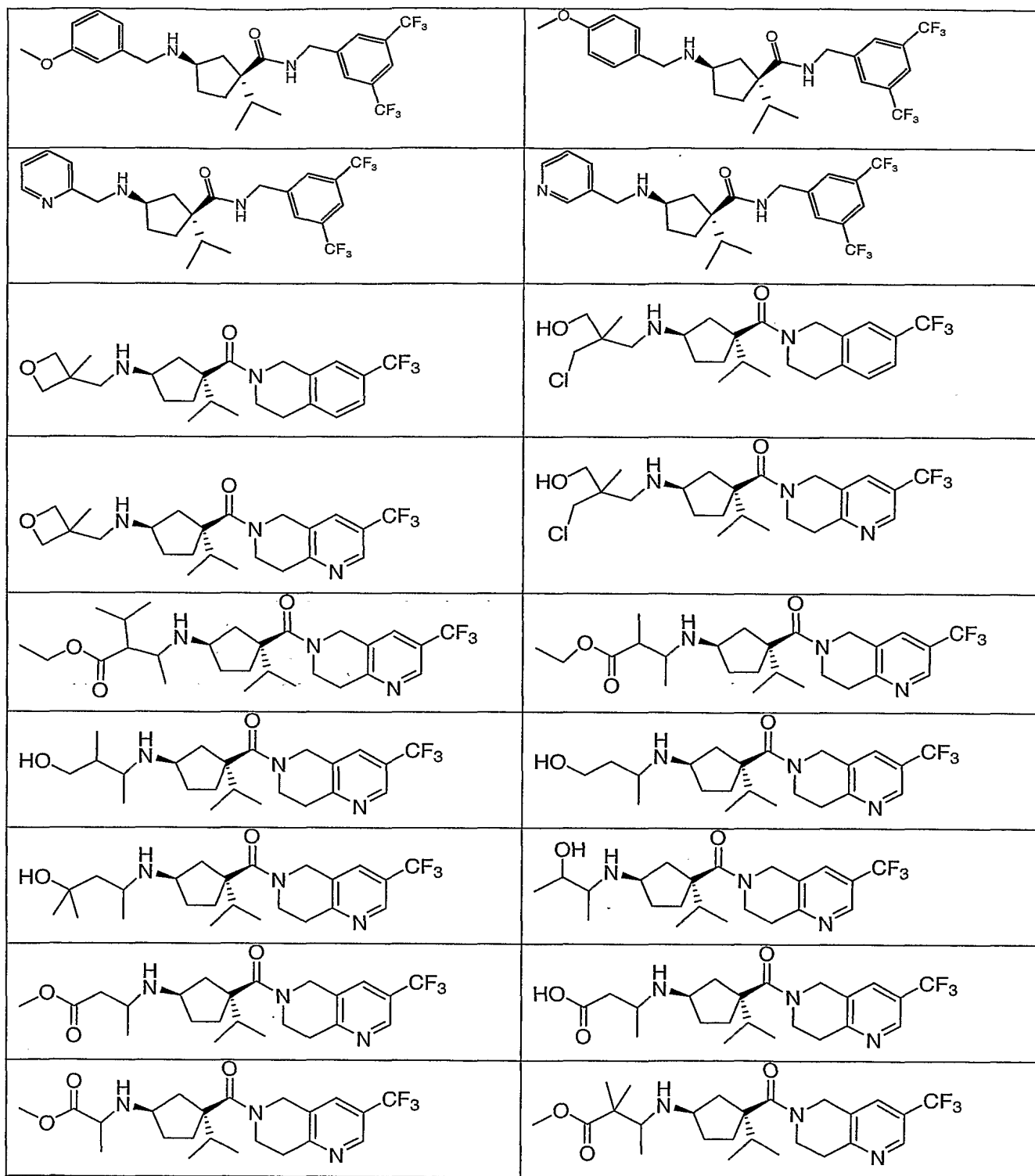
31. The compound of claim 1 wherein R¹⁰ is hydrogen and pharmaceutically acceptable salts thereof and individual diastereomers thereof.

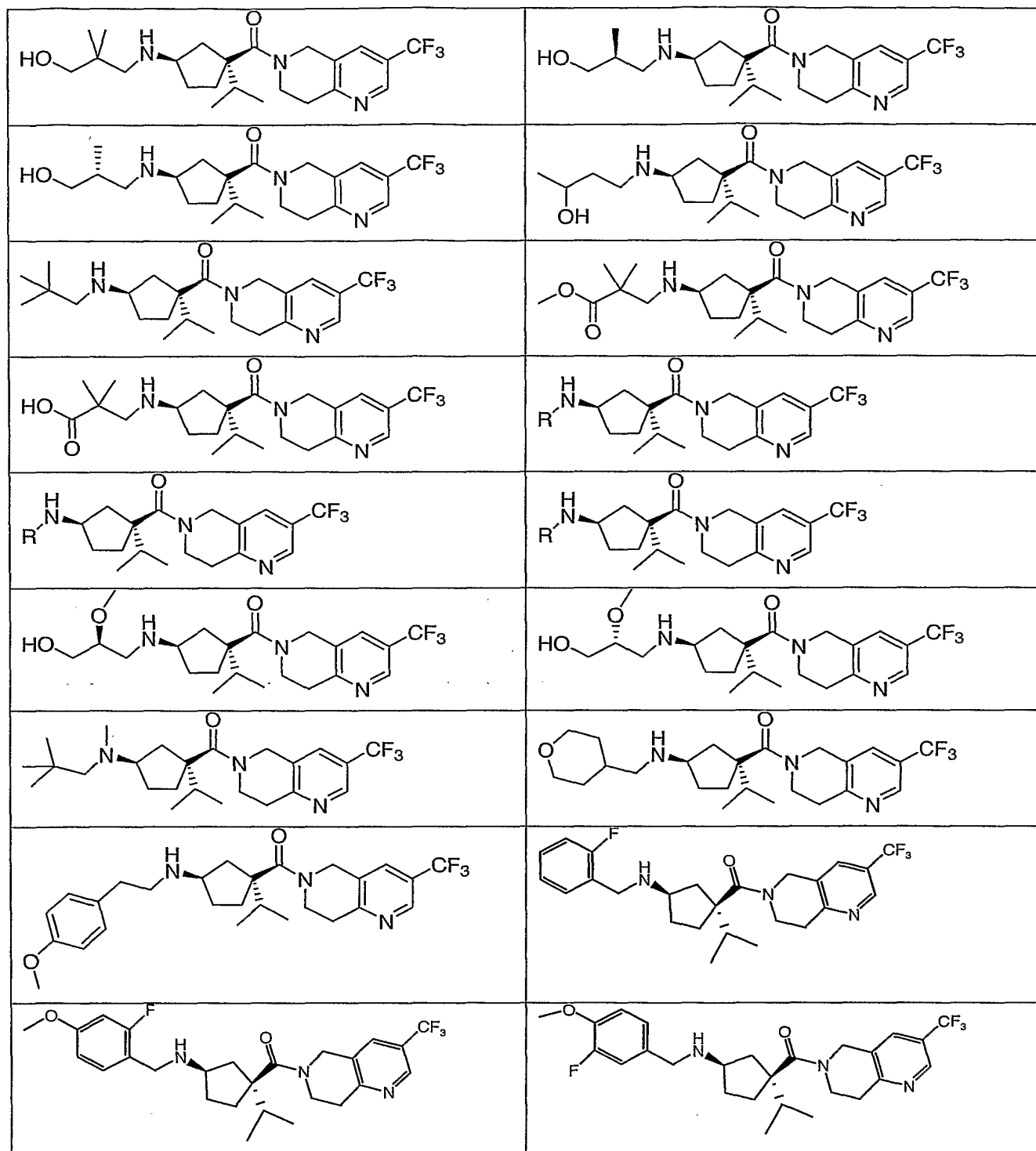
32. The compound of claim 1 wherein R¹⁵ is hydrogen or is joined to R², and pharmaceutically acceptable salts thereof and individual diastereomers thereof.

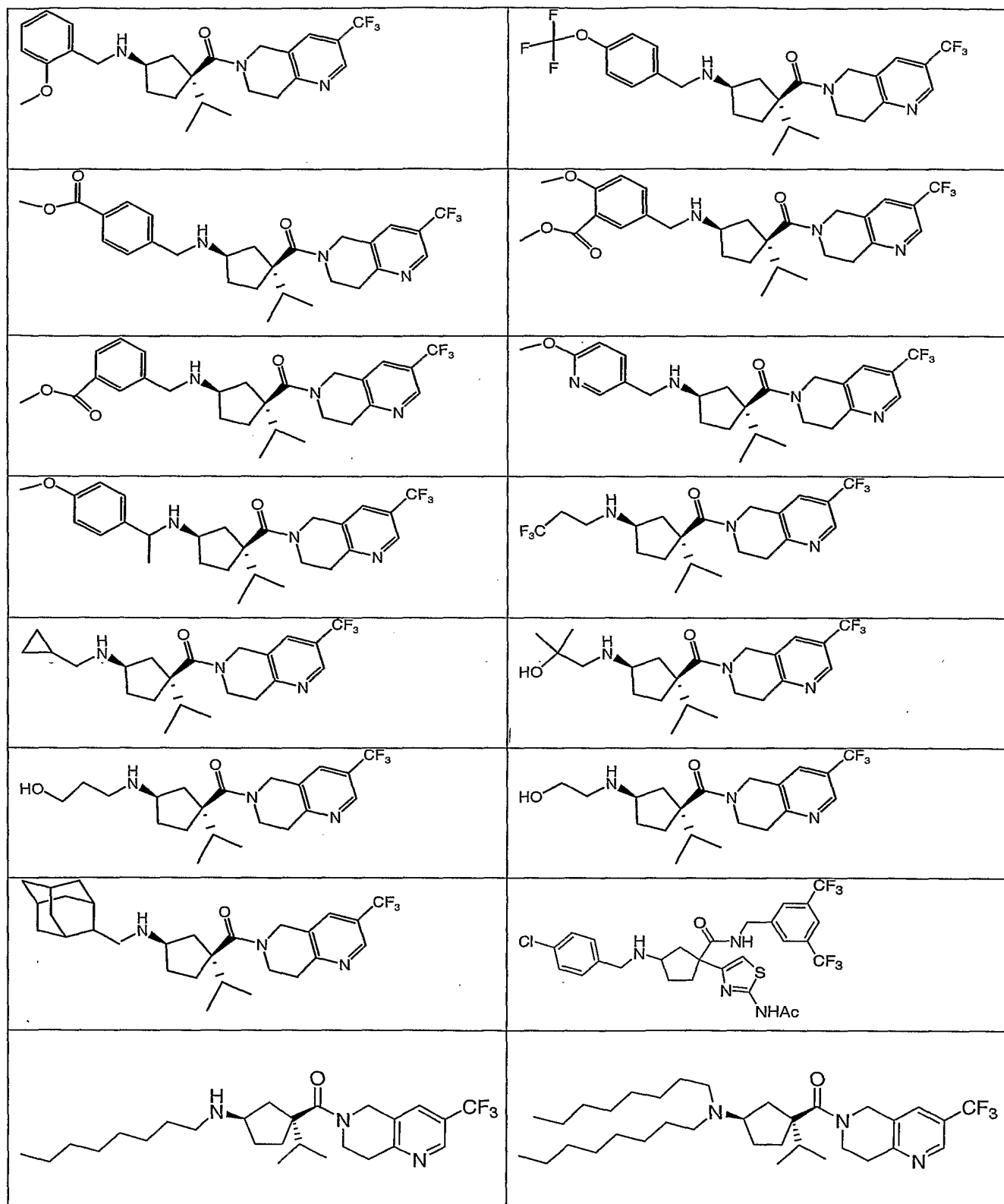
33. The compound of claim 1 wherein R¹⁶ is and pharmaceutically acceptable salts thereof and individual diastereomers thereof.

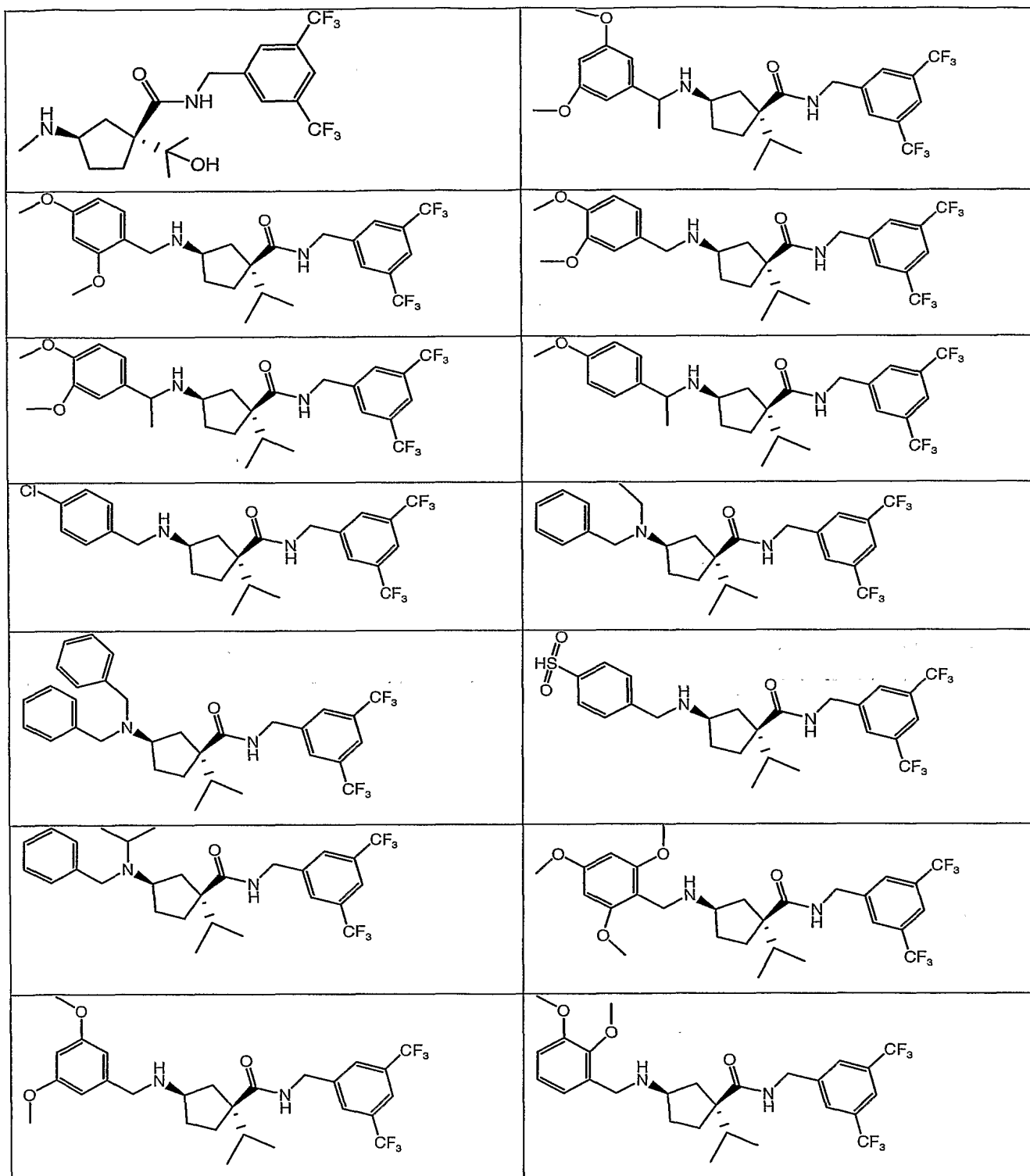
34. A compound selected from:

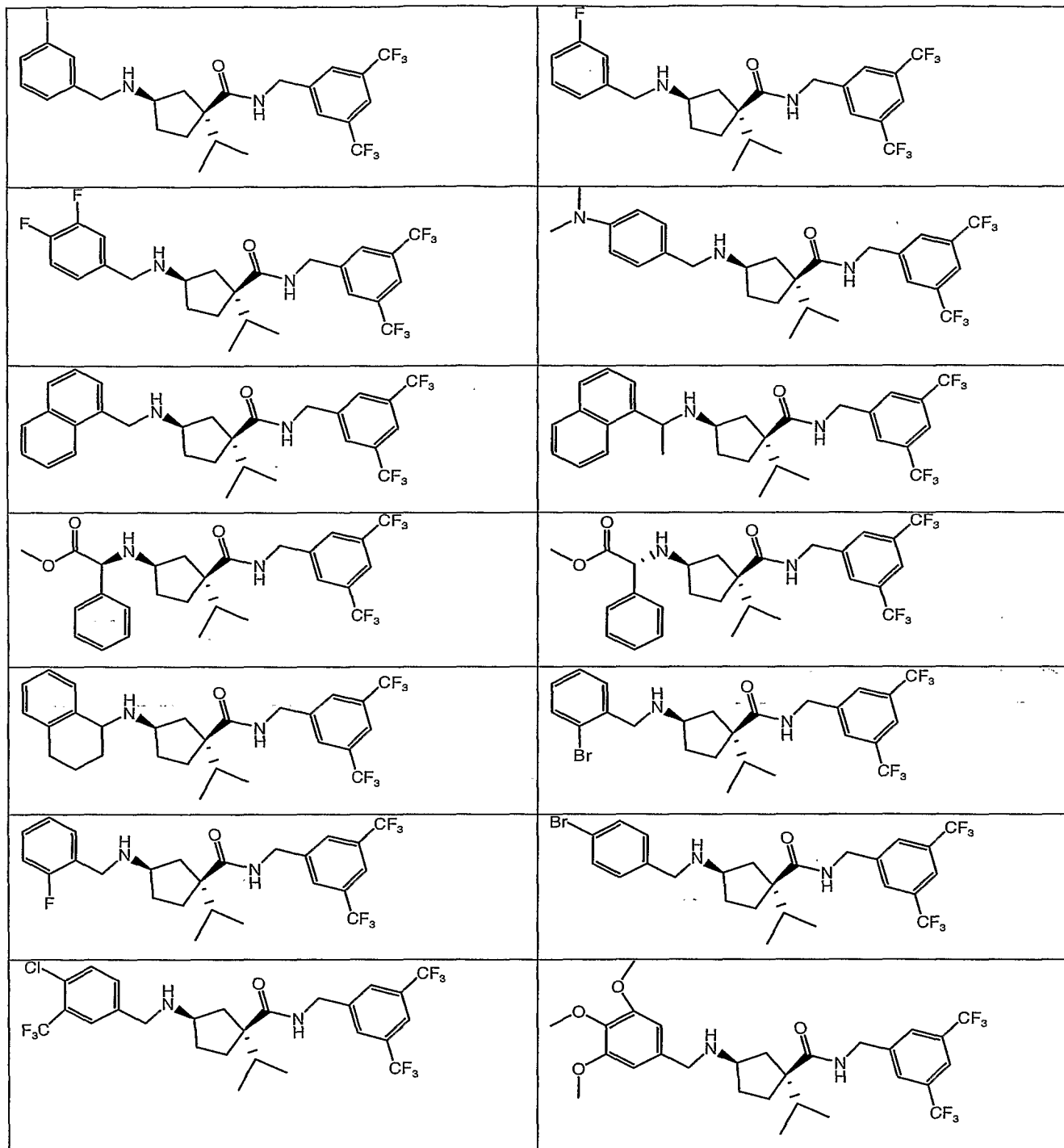


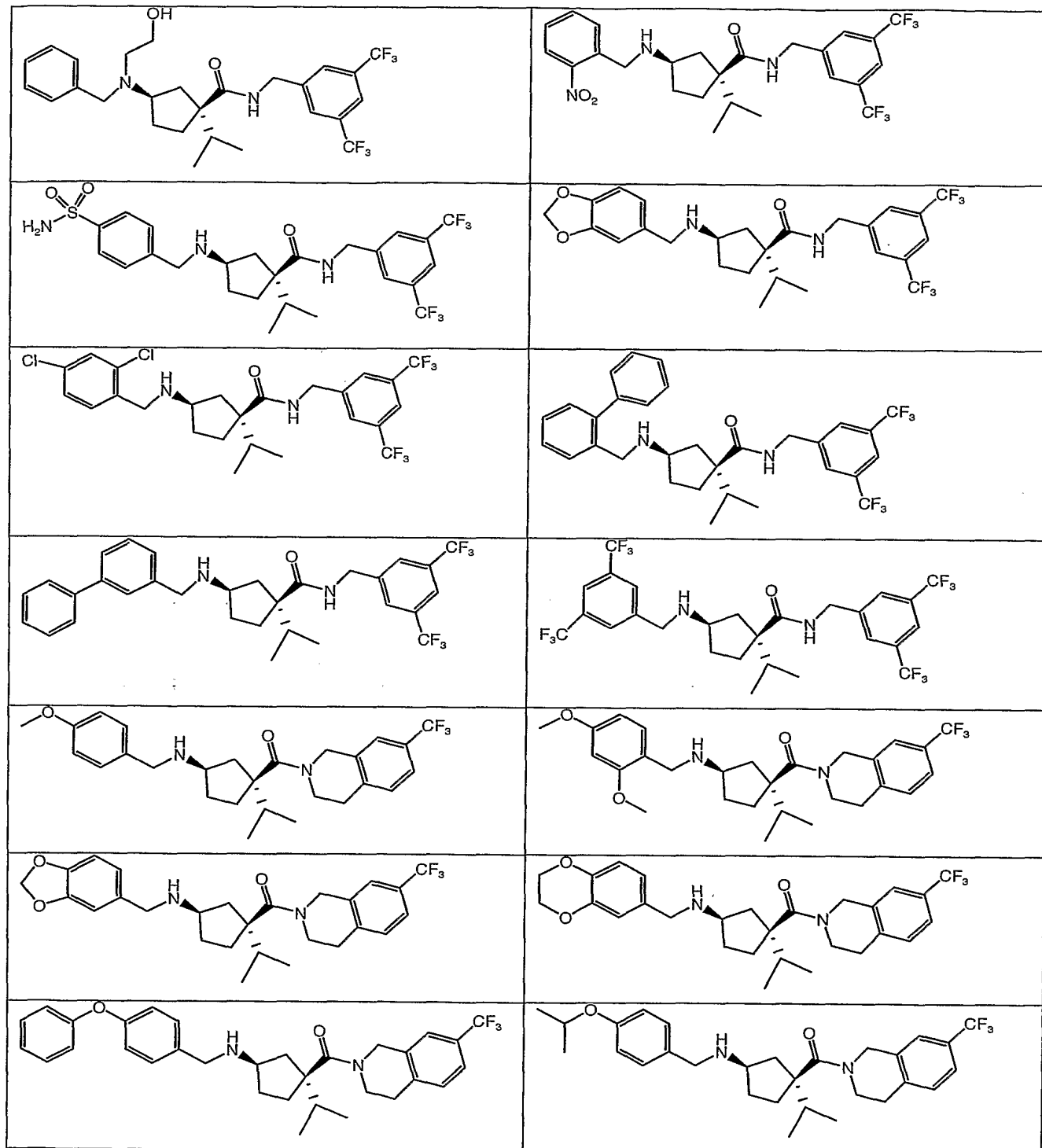


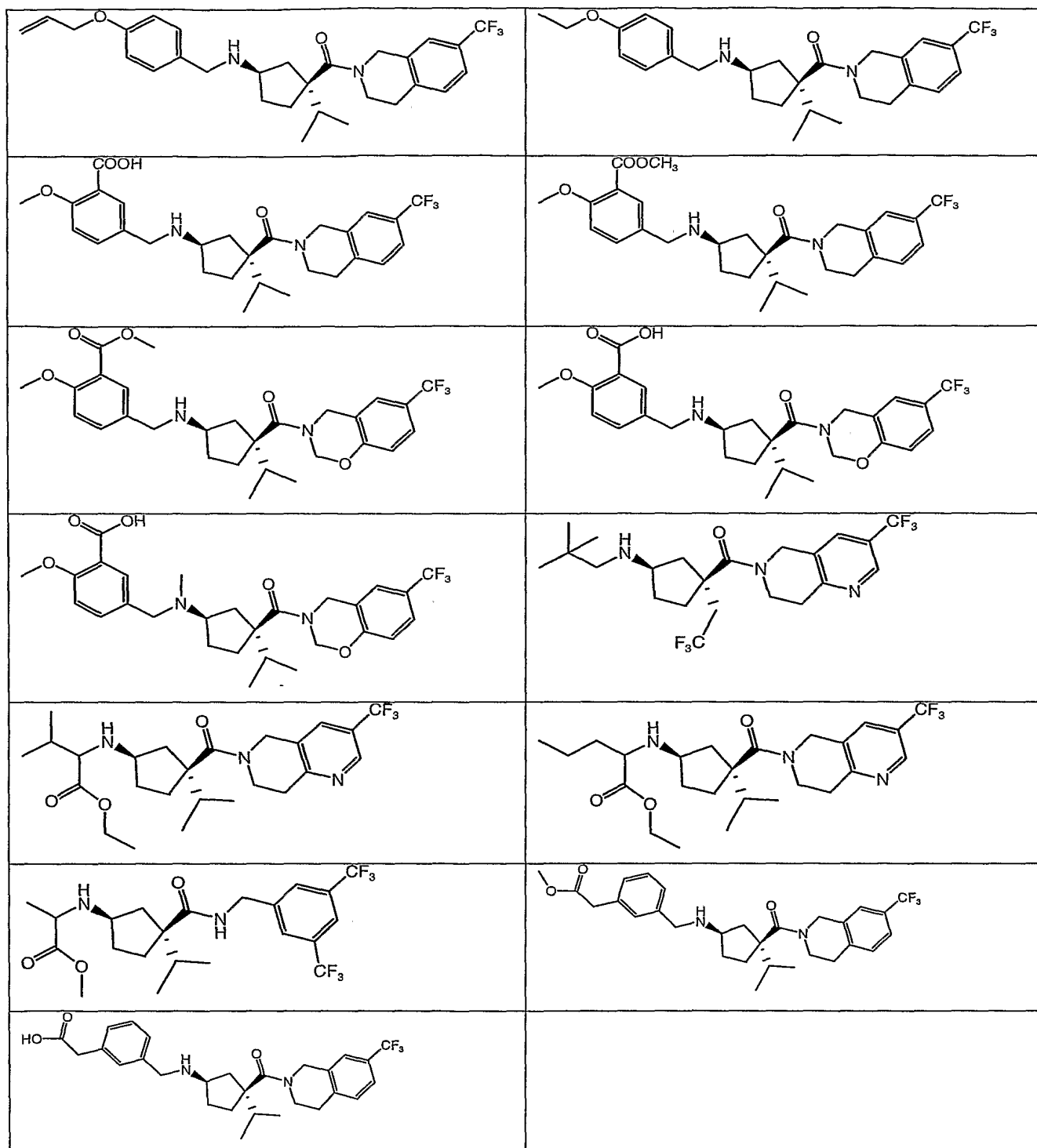












and pharmaceutically acceptable salts thereof and individual diastereomers thereof.

35. A pharmaceutical composition which comprises an inert carrier and a compound of Claim 1.

5 36. A method for modulations of chemokine receptor activity in a mammal which comprises the administration of an effective amount of a compound of Claim 1.

37. A method for treating, ameliorating, controlling or reducing the risk of an inflammatory and immunoregulatory disorder or disease which comprises the administration to a patient of an effective amount of a compound of Claim 1.

10

38. A method for treating, ameliorating, controlling or reducing the risk of rheumatoid arthritis which comprises the administration to a patient of an effective amount of a compound of Claim 1.